



File No. 14149-11US MG/lly

Québec, Canada
November 17, 2005

JFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Medicago Inc.
Inventor: Dominique Michaud et al.
Serial No.: 10/519,843 Filing date: July 4, 2005
Art Unit: 1638
Title: METHOD FOR ENHANCING YIELD OF RECOMBINANT
PROTEIN PRODUCTION FROM PLANTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to the duty of disclosure under 37 CFR 1.56, copies of the references listed on the attached PTO Form SB/08A/B are submitted herewith.

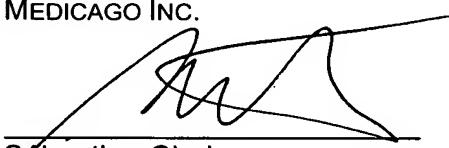
The Commissioner is hereby authorized to charge the fee of \$180.00, required for late submission of this Information Disclosure Statement in accordance with 37 CFR 1.97(c), to Deposit Account Number 19-5113. The Commissioner is further authorized to charge any fees which may be required, or credit any overpayment to the Deposit Account # 19-5113.

In accordance with 37 CFR 1.97(h), the submission of the present information is not to be construed as an admission that such information is, or is considered to be material to patentability.

The Examiner is kindly requested to consider these references during the examination of the above-identified application, making the references of record, and to return an initialed copy of the Form SB/08A/B to the undersigned agent.

Respectfully submitted,

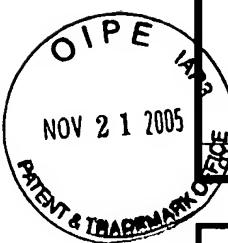
MEDICAGO INC.

By: 

Sébastien Clark
Patent Agent
Registration No. 56,651
OGILVY RENAULT, LLP
Customer No. 020988
1981 McGill College Avenue, Suite 1600
Montreal, Quebec, Canada H3A 2Y3
Tel. (514) 847-4259

Encls: Copies of references
Form PTO/SB/08A/B

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



<p>Substitute for form 1449A and B/PTO</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p>(use as many sheets as necessary)</p>		<i>Complete if Known</i>	
		Application Number	10/519,843
		Filing Date	January 13, 2005
		First Named Inventor	Dominique MICHAUD
		Art Unit	1638
		Examiner Name	
Sheet	1	of	5
		Attorney Docket Number	

U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant Of Cited Document	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear
		Country Code3 – Number4 – Kind Code5 (if known)			
		WO 9936516	07-22-1999	Guy DELLA-CIOPPA et al.	
		WO 9938987	08-05-1999	Véronique GRUBER et al.	
		WO 9839461	09-11-1998	John A. HOWARD	
		WO 0161023	08-23-2001	Lucas H. STEVENS et al.	
		WO 9946288	03-09-1999	Stephen J. GARGER et al.	
		WO 0125454	04-12-2001	L.P. VEZINA et al.	
		WO 0210415	02-07-2002	Yi LI et al.	

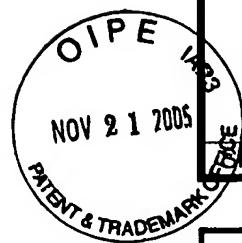
Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04 ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is

place a check mark here if English language Translation is
This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file
(and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2
hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the
individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to
the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR
COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-2121 (1-800-786-2121) or 703-305-9136, 8:00 a.m. to 4:00 p.m. Eastern Time, Monday through Friday.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



Substitute for form 1449A and B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT					
(use as many sheets as necessary)					
Sheet	2	of	5	Attorney Docket Number	14149-11US MG/lyl

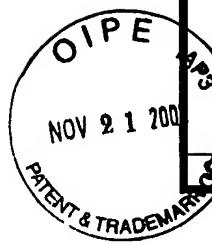
OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
		COPLEY KATHRIN S. ET AL, « Expression, processing and secretion of a proteolytically-sensitive insect diuretic hormone by <i>Saccharomyces cerevisiae</i> requires the use of a yeast strain lacking genes encoding the <i>Yap3</i> and <i>Mkc7</i> endopeptidases found in the secretory pathway », Biochemical Journal, vol. 330, no.3, 15 March 1998, pp 1333-1340.	
		WANDELT et al., 1992, « Vicilin with carboxy-terminal KDEL is retained in the endoplasmic reticulum and accumulates to high level in the leaves of transgenic plants », Plant J. 2: 181-192.	
		MICHAUD & YELLE, 2000, « Production of Useful Protease Inhibitors in Plants », in: Recombinant protease inhibitors in plants. Ed. Michaud Austin TX, pp. 195-206.	
		L. M. TABE et al., 1995, « A biotechnological approach for improving the nutritive value of alfalfa » J. Plant Sci. 73:2752-2759.	
		H. DANIEL et al., 2001, « Medical molecular farming: production of antibodies, biopharmaceuticals and edible vaccines in plants » Trends Plant Sci. 6:219-26.	
		C. REICHEL et al., 1996, « Enhanced green fluorescence by the expression of an <i>Aequorea victoria</i> green fluorescent protein mutant in mono- and dicotyledonous plant cells » PNAS 93,5888-93.	
		DARVEAU et al., 1995, « PCR-Mediated Synthesis of Chimeric Molecules », 26,77-85,1995	
		KAPILA et al., 1997, « An Agrobacterium-mediated transient gene expression system for intact leaves », Plant Science 101-108	
		T. MURASHIGE & F. SKOOG, 1962, « A revised medium for rapid growth and bioassays with tobacco tissue cultures », Physiologia Plantarum 15: 473-497.	
		F. BRUNELLE et al., 1999, « Protein hydrolysis by Colorado potato beetle (<i>Leptinotarsa decemlineata</i> Say: Chrysomelidae) digestive proteases: the catalytic role of cathepsin D. », Arch Insect Biochem. Physiol. 42:88-98.	
		K. EDWARDS et al., 1991, « A simple and rapid method for the preparation of plant genomic DNA for PCR analysis » Nucleic Acids Res. 19:1349.	

Examiner Signature		Date Considered
--------------------	--	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



Substitute for form 1449A and B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	10/519,843
Sheet	3	of	5	Filing Date	January 13, 2005
				First Named Inventor	Dominique MICHAUD
				Art Unit	1638
				Examiner Name	
				Attorney Docket Number	14149-11US MG/lyl

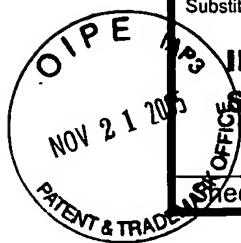
OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
		J. LOGEMANN et al., 1987, « <i>Improved method for the isolation of RNA from plant tissues</i> », Anal Biochem 163:16-20.
		H. WENZLER et al., 1989, « <i>A rapid and efficient transformation method for the production of large numbers of transgenic potato plants</i> », Plant Sci 63:79-85.
		R. WERNER et al., 1993, « <i>Nucleotide sequence of a cathepsin D inhibitor protein from tomato</i> », Plant Physiol 103:1473.
		MICHAUD et al., 1998, « <i>Stability of recombinant proteins in plants</i> », in: <i>Methods in Biotechnol., Recombinant proteins from plants: Production and isolation of clinically useful compounds</i> », Ed. Cunningham & Porer, Totowa, NJ, 3, pp177-188.
		D. MICHAUD et al., 1993, « <i>Electrophoretic analysis of plant cysteine and serine proteinases using gelatin-containing polyacrylamide gels and class-specific proteinase inhibitors</i> », Electrophoresis. 14(1-2):94-98.
		F. BRUNELLE et al., 2003, « <i>Colorado potato beetles compensate for tomato cathepsin D inhibitor expressed in transgenic potato</i> », Archives of Insect Biochemistry and Physiology (in press).
		D. MICHAUD et al., 1996, « <i>Assessing the stability of cystatin/cysteine proteinase complexes using mildly-denaturing gelatin/polyacrylamide gel electrophoresis</i> », Electrophoresis 17:74-79
		JT CHRISTELLER & BD SHAW, 1989, « <i>The interaction of a range of serine proteinase inhibitors with bovine trypsin and Costelytra zealandica trypsin</i> », Insect Biochem. 19: 233-241
		M. ABE et al., 1995, « <i>Two distinct species of corn cystatin in corn kernels</i> », Biosci Biotechnol Biochem. 59:756-758
		H. KONDO et al., 1990, « <i>Two distinct cystatin species in rice seeds with different specificities against proteinases. Molecular cloning, expression, and biochemical studies on orysacystatin-II</i> », J Biol Chem 265:15832-15837
		D. MICHAUD et al., 1996, « <i>Identification of stable plant cystatin/nematode proteinase complexes using mildly-denaturing gelatin/polyacrylamide gel electrophoresis</i> », Electrophoresis 17:1373-1379.

Examiner Signature	Date Considered
--------------------	-----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



Substitute for form 1449A and B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Application Number	10/519,843
Sheet	4	of	5	Filing Date	January 13, 2005
				First Named Inventor	Dominique MICHAUD
				Art Unit	1638
				Examiner Name	
				Attorney Docket Number	14149-11US MG/lly

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published		T ²
		D. MICHAUD et al., 2000, « Using natural and modified protease inhibitors », Recombinant Protease in Plants, Michaud D., Ed. Landes Bioscience, Georgetown TX, pp. 114-127.		
		VIERSTRA, 1996, « <i>Proteolysis in plants: mechanisms and functions</i> », Plant Mol. Biol. 32:275-302.		
		GLEDDIE & MICHAUD, 2000, « <i>The control of plant pathogens with protease inhibitors: A realistic approach?</i> », in: Recombinant protease inhibitors in plants. Ed. Michaud, Austin TX, pp. 53-64.		
		R. FISHER & N. EMANS, 2000, « <i>Molecular farming of pharmaceutical proteins</i> », Transgenic research, 9:279-299.		
		BRANDLE et al., 1993, « <i>Field performance and heavy metal concentrations of transgenic flue-cured tobacco expressing a mammalian metallothioneinbeta-glucuronidase gene fusion</i> », Genome 36:255-260.		
		D. MICHAUD., 2000, « <i>Protease/Inhibitor interactions in plant-pest systems</i> » In: Recombinant protease inhibitors in plants. Ed. Michaud, Austin TX, pp. 1-8		
		M. TAYLOR 2000, « <i>Using protease proregions as regulators of insect digestive proteinases</i> » In: Recombinant protease inhibitors in plants. Ed. Michaud Austin, TX, pp. 141-147.		
		ODELL et al., 1985, « <i>Identification of DNA sequences required for activity of the cauliflower mosaic virus 3S promoter</i> », Nature, Vol.313:810-812		
		AN et al., 1987, « <i>Binary Vectors</i> », Plant Molecular Biology Manual, A3:1-19		
		VAN BREUSEGEM et al., 1998, « <i>Processing of a chimeric protein in chloroplasts is different in transgenic maize and tobacco plants</i> », Plant Molecular Biology, 38:491-496		
		CREISSEN ET AL., 1995, « <i>Simultaneous targeting of pea glutathione reductase and of a bacterial fusion protein to chloroplast and mitochondria in transgenic tobacco</i> », The Plant Journal, Vol 8(2):167-175		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A and B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/519,843
				Filing Date	January 13, 2005
				First Named Inventor	Dominique MICHAUD
				Art Unit	1638
				Examiner Name	
(use as many sheets as necessary)					
Sheet	5	of	5	Attorney Docket Number	
				14149-11US MG/lyl	



INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

卷之三

6

of

5

Complete if Known

Application Number	10/519,843
Filing Date	January 13, 2005
First Named Inventor	Dominique MICHAUD
Art Unit	1638
Examiner Name	
Attorney Docket Number	14149-11US MG/lv

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.